



# IDAHO POTATOES

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Released: December 15, 2004

## IDAHO RUSSET POTATO SIZE AND GRADE SUMMARY - 2004 CROP

The statistics in this publication were obtained from the 2004 Potato Objective Yield Survey. The Idaho Agricultural Statistics Service would like to thank all growers who allowed the enumerators to dig samples in their fields. Without the voluntary cooperation of the farmers themselves, obtaining valid and timely agricultural statistics would be much more difficult. Because the samples of potatoes were dug by hand, the size and grade statistics in this document do not reflect harvesting or handling damage.

The survey results showed for the 2004 crop, 27.9 percent of the potatoes were at least ten ounces, compared to 23.3 percent that reached that size in 2003. Of the Russet potatoes in the 2004 sample, 78.6 percent met the 2.0 inch or 4 oz. minimum size and grade requirements for U.S. No. 1 potatoes. Processing grade, with a 1.5 inch minimum, accounted for 20.9 percent of the 2004 crop.

### PROCEDURE

The 2004 Potato Objective Yield Survey consisted of 276 samples located throughout Idaho in fields selected in an unbiased and random manner. The selection of sample fields was based on all known potato acreage planted in 2004, with each acre having an equal chance of being chosen. As a result, growers with large acreages were more likely to be selected to participate in this survey. Several sample fields with varieties other than russet were selected, but only the reports with Russet potatoes were used to compile the data in Tables 1 and 2. For each sample field, two plots were systematically located using computer generated random numbers. Each plot consisted of a twenty-foot section of a row. Digging of all samples occurred immediately preceding harvest or when all vines had died and growth of the tubers was no longer possible. Three hills of potatoes from each twenty-foot row section were carefully dug, counted, weighed, and then graded according to U.S.D.A. standards. Potatoes less than 1.5 inches in diameter were excluded from this procedure. To measure the harvest loss, post-harvest gleanings were taken for every fourth sample. The gleaning area consisted of two 3-by-6-foot plots, located five paces and five row space equivalents beyond the plots where the potato hills were dug. All potatoes and potato pieces, except whole potatoes under 1.5 inches in diameter, were collected, weighed, and graded. Geographic distribution of the 2004 sample fields is shown in the following table.

<u>AREA</u>	<u>COUNTIES</u>	<u>NO. OF SAMPLE PLOTS</u>
Southwest	Ada, Adams, Boise, Canyon, Elmore, Gem, Owyhee, Payette, Valley & Washington	35
Southcentral	Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka & Twin Falls	74
Eastern	Bannock, Bear Lake, Bingham, Bonneville, Franklin, Jefferson, Madison, Oneida & Power	133
Eastern Seed Counties	Butte, Caribou, Clark, Custer, Fremont, Lemhi & Teton	34
IDAHO TOTAL		276

**TABLE 1 -- IDAHO RUSSET POTATOES: SIZE AND GRADE -- 2004 CROP <sup>1/</sup>**

AREA AND GRADE	1 1/2" - 1 5/8"	1 5/8" - 1 7/8"	1 7/8" - 2"	2" or 4-6 oz	6-7 oz	7-8 oz	8-9 oz	9-10 oz	10-11 oz	11-12 oz	12-13 oz	13-14 oz	14 oz and over	Total
Percentages (%)														
<b>SOUTHCENTRAL COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	23.6	7.8	8.7	7.4	5.5	5.7	4.5	3.2	2.8	11.0	80.2
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.6	5.5	3.8	0.8	0.5	0.3	0.3	0.6	0.5	0.4	0.4	0.2	4.5	19.4
Cull <sup>4/</sup> .....	-	-	-	0.1	0.1	0.1	0.1	-	-	-	-	-	-	0.4
<b>TOTAL</b> .....	<b>1.6</b>	<b>5.5</b>	<b>3.8</b>	<b>24.5</b>	<b>8.4</b>	<b>9.1</b>	<b>7.8</b>	<b>6.1</b>	<b>6.2</b>	<b>4.9</b>	<b>3.6</b>	<b>3.0</b>	<b>15.5</b>	<b>100.0</b>
<b>EASTERN COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	25.6	9.3	8.7	7.8	6.1	4.5	4.0	3.2	2.2	7.3	78.7
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.8	6.6	5.0	0.8	0.4	0.3	0.4	0.3	0.2	0.2	0.4	0.3	4.2	20.9
Cull <sup>4/</sup> .....	-	-	-	0.1	-	0.1	0.1	0.1	-	-	-	-	-	0.4
<b>TOTAL</b> .....	<b>1.8</b>	<b>6.6</b>	<b>5.0</b>	<b>26.5</b>	<b>9.7</b>	<b>9.1</b>	<b>8.3</b>	<b>6.5</b>	<b>4.7</b>	<b>4.2</b>	<b>3.6</b>	<b>2.5</b>	<b>11.5</b>	<b>100.0</b>
<b>EASTERN SEED COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	32.2	9.0	6.7	5.8	4.7	3.8	3.7	2.6	1.6	4.1	74.2
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	2.4	9.6	7.1	1.3	0.3	0.2	0.4	0.4	0.2	-	-	0.8	2.3	25.0
Cull <sup>4/</sup> .....	-	0.2	0.1	0.2	-	-	0.1	-	0.1	-	-	-	0.1	0.8
<b>TOTAL</b> .....	<b>2.4</b>	<b>9.8</b>	<b>7.2</b>	<b>33.7</b>	<b>9.3</b>	<b>6.9</b>	<b>6.3</b>	<b>5.1</b>	<b>4.1</b>	<b>3.7</b>	<b>2.6</b>	<b>2.4</b>	<b>6.5</b>	<b>100.0</b>
<b>TOTAL OTHER COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	26.0	8.7	8.4	7.3	5.7	4.8	4.1	3.1	2.3	8.1	78.5
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.8	6.7	4.9	0.9	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.4	4.0	21.1
Cull <sup>4/</sup> .....	-	0.1	-	0.1	-	0.1	0.1	-	-	-	-	-	-	0.4
<b>TOTAL</b> .....	<b>1.8</b>	<b>6.8</b>	<b>4.9</b>	<b>27.0</b>	<b>9.1</b>	<b>8.8</b>	<b>7.8</b>	<b>6.1</b>	<b>5.1</b>	<b>4.4</b>	<b>3.4</b>	<b>2.7</b>	<b>12.1</b>	<b>100.0</b>
<b>10 SOUTHWEST COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	16.2	8.4	9.0	8.5	6.0	5.5	4.5	3.3	3.5	16.2	81.1
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.1	3.3	2.7	1.2	0.8	0.7	0.7	0.9	0.9	0.4	0.8	0.4	4.7	18.6
Cull <sup>4/</sup> .....	-	0.1	-	0.1	-	0.1	-	-	-	-	-	-	-	0.3
<b>TOTAL</b> .....	<b>1.1</b>	<b>3.4</b>	<b>2.7</b>	<b>17.5</b>	<b>9.2</b>	<b>9.8</b>	<b>9.2</b>	<b>6.9</b>	<b>6.4</b>	<b>4.9</b>	<b>4.1</b>	<b>3.9</b>	<b>20.9</b>	<b>100.0</b>
<b>STATE</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	25.8	8.8	8.4	7.3	5.7	4.8	4.2	3.1	2.3	8.2	78.6
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.8	6.6	4.9	0.9	0.4	0.2	0.4	0.4	0.3	0.2	0.4	0.4	4.0	20.9
Cull <sup>4/</sup> .....	-	0.1	-	0.1	-	0.1	0.1	-	0.1	-	-	-	-	0.5
<b>TOTAL</b> .....	<b>1.8</b>	<b>6.7</b>	<b>4.9</b>	<b>26.8</b>	<b>9.2</b>	<b>8.7</b>	<b>7.8</b>	<b>6.1</b>	<b>5.2</b>	<b>4.4</b>	<b>3.5</b>	<b>2.7</b>	<b>12.2</b>	<b>100.0</b>

1/ Gross yield basis.

2/ Potatoes which meet the requirements for U.S. #1, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

3/ Potatoes which meet the requirements for U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

4/ Potatoes not meeting the requirements for U.S. #1 or U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

**TABLE 2 -- IDAHO RUSSET POTATOES: SIZE AND GRADE -- 2003 CROP <sup>1/</sup>**

AREA AND GRADE	1 1/2" - 1 5/8"	1 5/8" - 1 7/8"	1 7/8" - 2"	2" or 4-6 oz	6-7 oz	7-8 oz	8-9 oz	9-10 oz	10-11 oz	11-12 oz	12-13 oz	13-14 oz	14 oz and over	Total
	Percentages (%)													
<b>SOUTHCENTRAL COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	25.5	8.1	7.6	5.5	5.2	4.0	3.7	3.2	2.2	6.1	71.1
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	2.1	7.7	5.2	1.9	1.0	1.1	1.1	0.9	0.9	0.7	0.7	0.6	4.0	27.9
Cull <sup>4/</sup> .....	-	-	0.1	0.2	0.1	0.2	-	0.1	0.1	-	-	-	0.2	1.0
<b>TOTAL</b> .....	<b>2.1</b>	<b>7.7</b>	<b>5.3</b>	<b>27.6</b>	<b>9.2</b>	<b>8.9</b>	<b>6.6</b>	<b>6.2</b>	<b>5.0</b>	<b>4.4</b>	<b>3.9</b>	<b>2.8</b>	<b>10.3</b>	<b>100.0</b>
<b>EASTERN COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	25.9	9.2	7.9	5.6	4.9	4.0	3.2	2.9	1.7	4.9	70.2
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	2.0	8.5	6.2	2.9	1.0	0.9	1.1	0.9	0.8	0.7	0.7	0.6	3.1	29.4
Cull <sup>4/</sup> .....	-	0.1	0.1	0.1	-	-	-	-	-	-	-	-	0.1	0.4
<b>TOTAL</b> .....	<b>2.0</b>	<b>8.6</b>	<b>6.3</b>	<b>28.9</b>	<b>10.2</b>	<b>8.8</b>	<b>6.7</b>	<b>5.8</b>	<b>4.8</b>	<b>3.9</b>	<b>3.6</b>	<b>2.3</b>	<b>8.1</b>	<b>100.0</b>
<b>EASTERN SEED COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	31.3	8.1	6.8	3.7	4.0	2.0	1.1	1.2	0.3	3.7	62.2
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	3.7	12.4	9.7	2.6	0.7	1.5	0.9	0.2	0.1	0.2	0.6	1.0	2.3	35.9
Cull <sup>4/</sup> .....	-	-	0.1	0.5	0.2	-	0.2	-	-	-	-	-	0.9	1.9
<b>TOTAL</b> .....	<b>3.7</b>	<b>12.4</b>	<b>9.8</b>	<b>34.4</b>	<b>9.0</b>	<b>8.3</b>	<b>4.8</b>	<b>4.2</b>	<b>2.1</b>	<b>1.3</b>	<b>1.8</b>	<b>1.3</b>	<b>6.9</b>	<b>100.0</b>
<b>TOTAL OTHER COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	26.2	8.7	7.7	5.4	5.0	3.8	3.2	2.8	1.7	5.2	69.7
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	2.2	8.6	6.2	2.5	1.0	1.0	1.1	0.8	0.7	0.6	0.7	0.7	3.4	29.5
Cull <sup>4/</sup> .....	-	0.1	0.1	0.2	0.1	0.1	-	0.1	0.1	-	-	-	-	0.8
<b>TOTAL</b> .....	<b>2.2</b>	<b>8.7</b>	<b>6.3</b>	<b>28.9</b>	<b>9.8</b>	<b>8.8</b>	<b>6.5</b>	<b>5.9</b>	<b>4.6</b>	<b>3.8</b>	<b>3.5</b>	<b>2.4</b>	<b>8.6</b>	<b>100.0</b>
<b>10 SOUTHWEST COUNTIES</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	19.4	6.1	7.2	5.6	5.8	3.8	3.4	2.7	2.6	11.3	67.9
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	1.1	4.5	4.1	2.1	2.2	2.1	1.8	1.7	1.2	1.8	0.5	1.6	6.9	31.6
Cull <sup>4/</sup> .....	-	-	-	-	-	-	-	-	-	0.2	-	-	0.3	0.5
<b>TOTAL</b> .....	<b>1.1</b>	<b>4.5</b>	<b>4.1</b>	<b>21.5</b>	<b>8.3</b>	<b>9.3</b>	<b>7.4</b>	<b>7.5</b>	<b>5.0</b>	<b>5.4</b>	<b>3.2</b>	<b>4.2</b>	<b>18.5</b>	<b>100.0</b>
<b>STATE</b>														
U.S. No. 1 (2" min.) <sup>2/</sup> .....	-	-	-	26.1	8.7	7.7	5.4	5.0	3.8	3.2	2.8	1.7	5.3	69.7
U.S. No. 2 or Processing Usable (1 1/2" min.) <sup>3/</sup>	2.2	8.5	6.1	2.5	1.0	1.0	1.1	0.8	0.7	0.7	0.7	0.7	3.4	29.4
Cull <sup>4/</sup> .....	-	0.1	0.1	0.2	-	0.1	-	0.1	0.1	-	-	-	0.2	0.9
<b>TOTAL</b> .....	<b>2.2</b>	<b>8.6</b>	<b>6.2</b>	<b>28.8</b>	<b>9.7</b>	<b>8.8</b>	<b>6.5</b>	<b>5.9</b>	<b>4.6</b>	<b>3.9</b>	<b>3.5</b>	<b>2.4</b>	<b>8.9</b>	<b>100.0</b>

1/ Gross yield basis.

2/ Potatoes which meet the requirements for U.S. #1, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

3/ Potatoes which meet the requirements for U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

4/ Potatoes not meeting the requirements for U.S. #1 or U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service.

**TABLE 3 - IDAHO ALL POTATOES: AVERAGE NUMBER OF TUBERS PER HILL & HILLS PER ACRE  
2003 & 2004 CROPS <sup>1/</sup>**

AREA	NUMBER OF SAMPLES		AVERAGE NUMBER OF TUBERS PER HILL		AVERAGE NUMBER OF HILLS PER ACRE	
	2003	2004	2003	2004	2003	2004
Southwest	33	35	9.3	8.9	12,802	12,979
Other	248	241	8.9	8.8	12,480	12,646
STATE	281	276	8.9	8.8	12,518	12,688

1/ Based on row measurements and counts in potato fields selected for objective yield samples.

**TABLE 4 -IDAHO ALL POTATOES: QUANTITY LEFT IN FIELD AFTER HARVEST - 2003 & 2004 CROPS <sup>1/</sup>**

AREA	2003 CROP		2004 CROP	
	NUMBER OF SAMPLES	CWT. PER ACRE	NUMBER OF SAMPLES	CWT. PER ACRE
Southwest	8	22	9	15
Southcentral	17	33	18	27
Eastern	33	24	25	28
Seed Co.'s	8	34	10	25
STATE	66	27	62	25

1/Potatoes left in the field at time of harvest. Based on counts in potato fields selected for postharvest samples.

**TABLE 5 -SELECTED STATES LONG POTATOES (RUSSET & SHEPODY) - 2004 CROP <sup>1/</sup>**

AREA AND SIZE	11/2"	15/8"	17/8"	2"or 4-6	6-7 oz	7-8 oz	8-9 oz	9-10 oz	10-11 oz	11-12 oz	12-13 oz	13-14 oz	14 oz and over	Total
	- 15/8"	- 17/8"	- 2"	Percentages (%)										
ID <sup>2/</sup>	1.8	6.7	4.9	26.8	9.2	8.7	7.8	6.1	5.2	4.4	3.5	2.7	12.2	100.0
MN	1.8	8.8	7.2	35.0	11.6	9.9	7.8	4.9	3.8	2.4	1.9	1.1	3.8	100.0
ND	1.1	6.9	5.5	26.1	10.7	9.9	8.7	6.7	5.9	3.7	3.6	2.3	8.9	100.0
OR	1.8	4.3	3.1	20.2	9.3	9.4	8.5	8.0	6.3	5.4	4.4	2.9	16.4	100.0
WA	0.9	3.7	3.0	21.7	10.0	9.0	8.2	7.0	6.3	5.7	4.8	4.0	15.7	100.0
WI	4.5	4.3	5.9	32.4	12.2	9.7	8.2	6.5	3.9	3.7	2.4	2.1	4.2	100.0

1/ Gross yield basis. 2/ Russet potatoes only.

**TABLE 6 - SELECTED STATES GRADING CATEGORIES - 2004 CROP <sup>1/</sup>**

AREA AND GRADE	U.S. NO. 1 2 INCH MINIMUM <sup>2/</sup>	U.S. NO. 2 OR PROCESSING USABLE <sup>3/</sup>	CULL <sup>4/</sup>	TOTAL
Percentages (%)				
LONG POTATOES				
ID <sup>5/</sup>	78.6	20.9	0.5	100.0
ME <sup>6/</sup>	70.2	12.4	17.4	100.0
MN	77.0	19.9	3.1	100.0
ND	77.8	17.5	4.7	100.0
OR	78.2	21.2	0.6	100.0
WA	82.6	16.7	0.7	100.0
WI <sup>4/</sup>	79.9	20.0	0.1	100.0

1/ Gross yield basis. 2/ Potatoes which meet the requirements for U.S. #1, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service. 3/ Potatoes which meet the requirements for U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service. 4/ Potatoes not meeting the requirements for U.S. #1 or U.S. #2, as stated in U.S. Standards for Grades of Potatoes, USDA, Agriculture Marketing Service. 5/ Russet potatoes only. 6/ Percent of net yield - adjusted for field loss.